Remarks

Entry of the amendments, reconsideration of the application, as amended, and allowance of all pending claims are respectfully requested. Claims 1-2 and 7-74 remain pending.

In the above amendments, applicants provide further details regarding the providing of configuration consistency. For example, applicants recite that the providing of configuration consistency includes performing a comparison between local data and global data. Support for this amendment can be found in the originally filed clams, as well as throughout the specification. For example, support can be found in originally filed dependent claim 2, as well as previously presented claim 7. Further, support can be found, for instance, on page 14, lines 22-27; page 7, lines 16-25; page 18, lines 1-6; page 27, lines 6-10 and page 36, lines 25-27 of applicants' specification. Thus, no new matter is being added.

In the Office Action dated April 8, 2003, claims 1, 2, 7-16, 19-23, 26-39, 42-46, 49-63, 66-70, 73 and 74 are rejected under 35 U.S.C. 102(e) as being anticipated by Slaughter et al. (U.S. Patent No. 6,104,669). Additionally, claims 17, 18, 40, 41, 64 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Slaughter in view of Modiri et al. (U.S. Patent No. 6,192,401); and claims 24, 25, 47, 48, 71 and 72 are rejected under U.S.C. 103(a) as being unpatentable over Slaughter et al. in view of Zhang et al. (U.S. Patent No. 5,832,182). Applicants respectfully, but most strenuously, traverse these rejections to the extent deemed applicable to the amended claims for the reasons below.

In one aspect, applicants' invention is directed to the managing of cluster configurations. For instance, protocols are provided for ensuring the consistency of a cluster configuration. In one particular example, applicants claim a method of managing cluster configurations of a computing environment (e.g., independent claim 1). The method includes, for instance, executing a distributed configuration component on a plurality of nodes of a cluster of a computing environment; and providing configuration consistency of the cluster using the distributed configuration component, wherein the providing configuration consistency includes performing a comparison between local data and global data. Thus, in applicants' claimed invention, the providing of configuration consistency includes a comparison of local data and global data. This is very different from the teachings of Slaughter.

While Slaughter is concerned with providing a consistent configuration database, the manner in which Slaughter achieves this goal is very different from that claimed by applicants. For example, Slaughter does not use a global database, but only data stored locally at each node. Thus, there is no comparison between local data and global data, as claimed by applicants. To further describe, in Slaughter, each node in the cluster maintains its own copy of a configuration database, and thus, configuration database operations can be performed from any node (see, e.g., Abstract, lines 4-6). This is local data to each node. The consistency of this local data is verified from a consistency record, which is located within the local data (see, e.g., Col. 2, lines 45-47):

> Each local copy of the configuration database uses a self-
> contained consistency record to uniquely identify and
> stamp each copy of the configuration database. The
> consistency of each local copy of the configuration
> database can be verified from the consistency record.

Thus, in Slaughter, the consistency record in the local data is used to determine whether the local data is invalid. There is no comparison between local data and global data, as claimed by applicants.

Slaughter explicitly chose an implementation that avoids using a global or central repository. This is described throughout the Background of Slaughter, in which the problems associated with such repositories are discussed. Instead of using global repositories, Slaughter uses local repositories on each node. If one of the local databases is invalid, as indicated by the local consistency record, it is replaced by a database from another node. Again, there is no teaching of a comparison between local data and global data.

Slaughter does make mention of global consistency, or cluster wide consistency, in which the cluster configuration database uses a two-phase commit protocol to guarantee the consistency of the configuration database after a configuration database update (see, e.g., Col. 5, lines 30-34). This description of global consistency, however, is very different from a description of comparing local data with global data. The global consistency in Slaughter is merely ensuring that all the local copies remain consistent. Again, there is no description, teaching or suggestion of comparing global data with local data. Instead, to provide global consistency, each node stores a backup copy of the configuration database, and if an update fails, then the node can be

restored to the backup copy. There is no description, teaching or suggestion of comparing local data with global data. Thus, applicants respectfully submit that Slaughter does not teach or suggest applicants' claimed invention.

To support a rejection of comparing data in local storage with data in global storage, the Office Action refers to Col. 4, lines 48-52; Col. 5, lines 24-27; Col. 7, lines 32-36; and Col. 7, lines 58 – Col. 8, line 4 (see rejection of claims 2 and 7). However, applicants respectfully submit that a careful reading of those sections, as well as the remainder of Slaughter, does not describe, teach or suggest any comparison between local data and global data. For instance, Col. 4, lines 48-52 merely state that a reconfiguration algorithm is provided to update a cluster configuration database and maintain consistent data. No comparison is described. Further, Col. 5, lines 24-27 merely describe a two level consistency framework in which the cluster configuration database first checks local consistency and then global consistency. Again, the local consistency is determined using a local consistency record, and thus, there is no comparison between local data and global data. Moreover, the global consistency is not a comparison between local data and global data, but instead, is just an ensurance that the configuration database on each node is consistent after a configuration database update. Again, there is no description, teaching or suggestion of comparing local data with global data. This is also true for the descriptions in Col. 7 – Col. 8. Since Slaughter fails to teach or suggest applicants' claimed feature of providing configuration consistency which includes performing a comparison between local data and global data, applicants respectfully submit that Slaughter does not anticipate applicants' claimed invention. Thus, applicants respectfully request an indication of allowability for claim 1, as well as the other independent claims.

Further, the dependent claims are patentable for the same reasons as the independent claims, as well as for their own additional features. The cited art does not overcome the deficiencies of Slaughter. Thus, applicants respectfully request an indication of allowability for all pending claims.

Should the Examiner wish to discuss this case with applicants' attorney, please contact applicants' attorney at the below listed number.

Respectfully submitted,

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